VR 321
G-02088
Well # A-4
ST 03

API # 17706400 8203 ✓
Issue: 14 May 03

PATHFINDER
ENERGY SERVICES

DIRECTIONAL SURVEY REPORT

NEXEN PETROLEUM

OCS-G-2088 A4 ST3

VERMILION BLOCK 321

PREPARED BY: ROCK BRUNET

6

PathFinder Energy Services, Inc.
3329 West Pinhook Road, Lafayette, LA 70508
(337) 233-3982

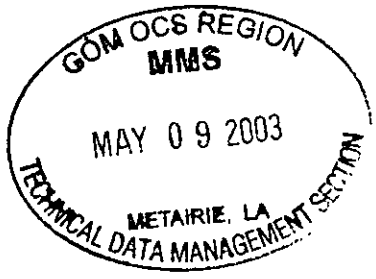
RKB = 135'

PATHFINDER
ENERGY SERVICES

3329 West Pinhook Road • Lafayette, LA 70508 • Phone: 337-233-3982 or 800-377-3982 • Fax: 337-234-2988

May 8, 2003

TDMS (MS 5020)
Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394



Attn: Chris Gaudry

RE: NEXEN PETROLEUM
OCS-G-2088 A4 ST3
VERMILION BLOCK 321
RIG: NOBLE BILL JENNINGS
API NO.: 17-706-40082-03
OUR FILE NO.: J-GC-0304-0088

Dear Sir:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

SURVEY DATA
1 - Original survey report
1 – Survey report copies
1 - Survey diskette Filename: 008803.MMS

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,

Rock Brunet

Rock Brunet
LWD Service Coordinator
PathFinder Energy Services

CC: Nexen Pet. / Jim McFarland – 1 Survey

PATHFINDER
ENERGY SERVICES

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES

2. NAME OF PERSON(S) PERFORMING SURVEY: A) CARLOS CONTRERAS
   B) JOEY HAINS
   C) MIKE ANGELLE

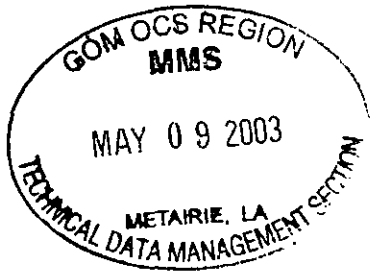
3. POSITION OF SAID PERSON(S): (A-C) SURVEYORS (FIELD ENGINEERS)

4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 04/22/03 TO 05/01/03

5. STATE IN WHICH SURVEY WAS PERFORMED: OFFSHORE, LOUISIANA

6. LOCATION OF WELL: VERMILION BLOCK 321

7. TYPE OF SURVEY(S) PERFORMED: MWD



8. COMPLETE IDENTIFICATION OF WELL:

   NEXEN PETROLEUM
   OCS-G-2088 A4 ST3
   VERMILION BLOCK 321
   RIG: NOBLE BILL JENNINGS
   API NO.: 17-706-40082-03

9. SURVEY(S) CERTIFIED FROM: 8,793 TO 9,763 FEET MEASURED DEPTH.

10. SURVEY DISKETTE(S) ARE INCLUDED AND ARE IN ACCORDANCE WITH MMS FORMAT. THE FILENAME IS: 008803.MMS

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 2,217.58 FEET ON A BEARING OF 355.97 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT PROJECTED MEASURED DEPTH OF 9,806 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Rock Brunet

ROCK BRUNET
LWD SERVICE COORDINATOR

Pathfinder

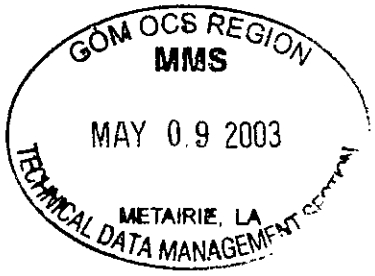
BHL Report

Job No: J-GC-0304-0088
Date: 5/1/2003
Time: 10:02 pm
Wellpath ID: OCS-G-2088 A4 ST3
Date Created: 4/20/2003
Last Revision: 5/1/2003

Calculated using the Minimum Curvarture Method
Computed using PDS VER2.2.6
Vertical Section Plane: 354.68 deg.

Survey Reference: WELLHEAD
Reference World Coordinates: Lat. 28.17.55 N - Lon. 92.34.45 W
Reference GRID System: LAMBERT Zone: Louisiana South
Reference GRID Coordinates: 1598922.00 X -131705.99 Y
North Aligned to: GRID NORTH
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

NEXEN PETROLEUM USA, INC
OCS-G-2088 A4 ST3
VERMILION BLK. 321
NOBLE BILL JENNINGS



DECL: 3.22° EAST TO GRID
KBH: 135' RKB TO MSL

PATHFINDER OFFICE SUPERVISOR
A.J. BROUSSARD
PATHFINDER FIELD ENGINEERS
CARLOS CONTRERAS / JOEY HAINS
MIKE ANGELLE

Measured Depth	9806.00	(ft)
Inclination	55.31	(deg)
Azimuth	5.07	(deg)
True Vertical Depth	9320.07	(ft)
Vertical Section	2217.02	(ft)
Grid Coordinates		
X	1598766.02	(ft)
Y	-129493.91	(ft)
Rectangular Offsets		
North/South	2212.08 N	(ft)
East/West	155.98W	(ft)
Closure Dist & Dir	2217.58@355.97	(deg)
Dogleg Severity	0.00	(deg/100ft)
Build Rate	0.00	(deg/100ft)
Walk Rate	0.00	(deg/100ft)

Pathfinder

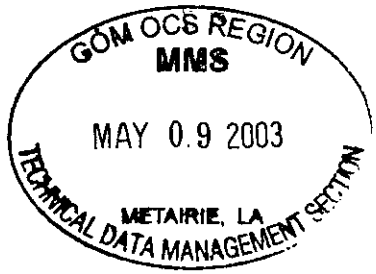
Survey Report

Job No: J-GC-0304-0088
Date: 5/1/2003
Time: 10:02 pm
Wellpath ID: OCS-G-2088 A4 ST3
Date Created: 4/20/2003
Last Revision: 5/1/2003

Calculated using the Minimum Curvarture Method
Computed using PDS VER2.2.6
Vertical Section Plane: 354.68 deg.

Survey Reference: WELLHEAD
Reference World Coordinates: Lat. 28.17.55 N - Lon. 92.34.45 W
Reference GRID System: LAMBERT Zone: Louisiana South
Reference GRID Coordinates: 1598922.00 X -131705.99 Y
North Aligned to: GRID NORTH
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

NEXEN PETROLEUM USA, INC
OCS-G-2088 A4 ST3
VERMILION BLK. 321
NOBLE BILL JENNINGS



DECL: 3.22° EAST TO GRID
KBH: 135' RKB TO MSL

PATHFINDER OFFICE SUPERVISOR
A.J. BROUSSARD
PATHFINDER FIELD ENGINEERS
CARLOS CONTRERAS / JOEY HAINS
MIKE ANGELLE

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	(ft)	Closure Dist. (ft)	Dir. (deg.)	DLS (dg/100ft)
TIED INTO ORIGINAL WELLBORE SURVEY @ 8342' MD.										
8342.00	12.05	354.03	8200.02	8065.02	1384.63	1368.08 N	242.08W	1389.33	@ 349.97	0.00
THE FOLLOWING ARE JANIC DIRECTIONAL GYRO SURVEYS.										
8440.00	14.00	1.00	8295.50	8160.50	1406.65	1390.11 N	242.94W	1411.18	@ 350.09	2.55
8540.00	15.00	3.00	8392.31	8257.31	1431.47	1415.13 N	242.05W	1435.68	@ 350.29	1.12
8640.00	16.75	3.00	8488.50	8353.50	1458.54	1442.44 N	240.62W	1462.37	@ 350.53	1.75
8698.00	17.00	4.00	8544.00	8409.00	1475.18	1459.25 N	239.59W	1478.79	@ 350.68	0.66
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
8793.00	23.92	9.00	8632.96	8497.96	1507.58	1492.17 N	235.60W	1510.65	@ 351.03	7.51
8851.00	27.35	11.67	8685.24	8550.24	1531.73	1516.84 N	231.07W	1534.33	@ 351.34	6.24
8945.00	33.06	10.29	8766.45	8631.45	1577.11	1563.25 N	222.11W	1578.95	@ 351.91	6.12
8990.00	35.53	10.81	8803.62	8668.62	1601.49	1588.17 N	217.46W	1602.99	@ 352.20	5.53
9040.00	39.31	10.60	8843.33	8708.33	1630.69	1618.02 N	211.82W	1631.83	@ 352.54	7.56
9076.00	41.50	10.10	8870.74	8735.74	1653.16	1640.98 N	207.63W	1654.06	@ 352.79	6.15
9108.00	43.53	9.62	8894.32	8759.32	1674.03	1662.28 N	203.93W	1674.74	@ 353.01	6.42
9134.00	45.37	9.29	8912.88	8777.88	1691.63	1680.24 N	200.94W	1692.21	@ 353.18	7.13
9170.00	47.31	7.83	8937.74	8802.74	1716.92	1705.99 N	197.07W	1717.34	@ 353.41	6.14
9202.00	48.98	6.68	8959.09	8824.09	1740.18	1729.63 N	194.07W	1740.49	@ 353.60	5.87
9228.00	50.12	5.50	8975.96	8840.96	1759.57	1749.31 N	191.97W	1759.81	@ 353.74	5.58
9264.00	52.14	4.37	8998.55	8863.55	1787.15	1777.23 N	189.56W	1787.31	@ 353.91	6.12
9296.00	52.58	3.70	9018.09	8883.09	1812.15	1802.51 N	187.78W	1812.26	@ 354.05	2.15
9388.00	52.67	4.19	9073.94	8938.94	1884.31	1875.44 N	182.75W	1884.33	@ 354.43	0.43

Pathfinder

Survey Report

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Subsea Depth (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	(ft)	Closure Dist. (ft)	Dir. (deg.)	DLS (dg/100ft)
9419.00	52.50	4.19	9092.77	8957.77	1908.59	1900.00 N	180.95W	1908.60	@ 354.56	0.55
9452.00	52.23	4.54	9112.92	8977.92	1934.35	1926.06 N	178.96W	1934.35	@ 354.69	1.17
9483.00	52.23	4.54	9131.91	8996.91	1958.50	1950.48 N	177.02W	1958.50	@ 354.81	0.00
9515.00	52.67	4.54	9151.41	9016.41	1983.49	1975.78 N	175.01W	1983.51	@ 354.94	1.37
9548.00	52.94	4.01	9171.36	9036.36	2009.41	2001.99 N	173.05W	2009.45	@ 355.06	1.52
9580.00	53.38	4.19	9190.55	9055.55	2034.68	2027.53 N	171.22W	2034.75	@ 355.17	1.45
9608.00	53.82	4.10	9207.16	9072.16	2056.91	2050.01 N	169.59W	2057.01	@ 355.27	1.59
9643.00	54.87	4.80	9227.56	9092.56	2084.93	2078.36 N	167.39W	2085.09	@ 355.40	3.41
9674.00	55.22	5.07	9245.33	9110.33	2109.93	2103.68 N	165.20W	2110.15	@ 355.51	1.34
9702.00	55.93	4.63	9261.15	9126.15	2132.67	2126.69 N	163.25W	2132.95	@ 355.61	2.85
9738.00	55.57	4.63	9281.42	9146.42	2161.98	2156.35 N	160.85W	2162.34	@ 355.73	1.00
9763.00	55.31	5.07	9295.60	9160.60	2182.24	2176.87 N	159.11W	2182.67	@ 355.82	1.78
STRAIGHT LINE PROJECTION TO THE BIT @ 9806' MD.										
9806.00	55.31	5.07	9320.07	9185.07	2217.02	2212.08 N	155.98W	2217.58	@ 355.97	0.00